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EXAMINER

TRUONG, THANHNGA B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2135

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,288

Applicant(s)

LITWIN ET AL.

Examiner

Thanhnga B. Truong

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4, 6-13, 15, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6-13, 15, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 3 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/18/2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Art Unit: 2135

DETAILED ACTION

1. Applicant's amendment filed on January 24, 2006 has been entered. Claims 1-2, 4, 6-13, 15, and 17-18 are pending. Claims 5 and 16 are cancelled by the applicant, and claims 3 and 14 are objected by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4, 6-13, 15, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al (US 6,240,513 B1), and further in view of Meiksin et al (US 6,370,396 B1).

a. Referring to claim 1:

i. Friedman teaches:

(1) transmitting a private key individually to each of the plurality of powerline modem devices to be secured in a network such that each powerline modem device receives the private key in isolation of the network by connecting each of the plurality of the powerline modem devices to a portable security device which transmits the private key (e.g., audio signal, audio message, voice signal, etc.) directly to the powerline modem device in isolation from other powerline modem devices, each of the plurality of powerline modem devices store the private key; computing a public key, by a master device in the network to be secured; transmitting the public key from the master device to the plurality of devices; computing a shared key at each of the plurality of powerline devices based on the public key and the private key; and communicating within the secured network by employing messages encrypted based on the shared key **[i.e., a preferred embodiment of the inventive network security device comprises a first network interface connected to a protected client, a second network interface connected to a portion of a network, and a**

processing circuit connected to both interfaces. A communication from the protected client goes from the client, to the first interface, to the processing circuit, to the second interface and into the network. Similarly, a communication received from the network goes from the second interface, to the processing circuit, to the first interface and to the protected client. A preferred embodiment of the present invention has four keys associated with it: (1) a static (permanent) private key; (2) dynamic (changing) private key; (3) a static public key; and (4) a dynamic public key. In a preferred embodiment, the public keys are exchanged between two network security devices in order to establish a common secret key. The common secret key is the key which is used to encrypt/decrypt all messages between two particular devices. This key should not be transmitted. The common crypto key (i.e., the common secret key) is obtained using a public key cryptography technique (column 5, lines 15-65)].

ii. However, Friedman does not mention the use of powerline modem device which connects to a portable security device, whereas Meiksin teaches:

(1) Figure 17 illustrates a typical implementation of a powerline communications module showing connections between individual blocks. The powerline communications module 1700 includes an interface module 1701 comprising a digital signal processor ("DSP"), logic, and active electronics for processing the audio signals and external control signals. The interface module 1701 is connected to an AC powerline modem 1702 through connections 1707. The connection 1707 may be standard RS-232 serial communications. The AC powerline modem 1702 modulates and demodulates digital data for transmission and reception over the AC powerline (column 20, lines 24-35). In addition, Meiksin further teaches the powerline communications module includes capability to drive each RF transceiver to transmit an audio signal so that anyone within range of the transceiver may receive and hear the audio message, via portable hand-held radio, for example. Similarly, when anyone within range of a RF transceiver desires to communicate with another individual, they simply talk into their portable hand-held radio and the nearest RF transceiver receives the broadcast and informs the powerline communications module that is receiving a

Art Unit: 2135

valid RF broadcast. The RF transceiver may also send the demodulated voice signal to the communications module (**column 18, lines 23-34 of Meiksin**). The powerline communications modules also may include electronic devices such as portable computers, sensors, or automated equipment connected to one or more control modules. The connection may be accomplished using the standard RS-232 data communications protocol so that, e.g., the digital process information may be monitored and/or controlled remotely from within the site. In one embodiment, the present invention includes a RS-232 connection to each control module (**column 19, lines 6-14 of Meiksin**). Meiksin also discloses in great details the isolated powerline communications, which is met on **column 19, lines 29-67 through column 20, lines 1-12 of Meiksin**.

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) include such powerline communications module (in Friedman's Figures 4A-4B) for providing a two-way bi-directional voice communications as well as digital communications in the environment where electromagnetic energy transfer is blocked or limited (**column 2, lines 65-67 of Meiksin**).

iv. The ordinary skilled person would have been motivated to:

(1) improvements in a network security device that is connected between a protected computer("the client") and a network and/or a protected local area network (LAN) and a wide area network (WAN) as well as a method for using the network security device (**column 1, lines 15-20 of Friedman**).

b. Referring to claims 2, 4, 10-11, 13, 15, 18:

i. These claims have limitations that is similar to those of claim 1, thus they are rejected with the same rationale applied against claim 1 above.

c. Referring to claims 6-7:

i. These claims have limitations that is similar to those of claim 5, thus they are rejected with the same rationale applied against claim 5 above.

d. Referring to claim 8:

i. Meiksin further teaches:

Art Unit: 2135

(1) wherein the data includes a software update for a powerline modem device [i.e., a software algorithm may be implemented to perform the coding and/or decoding of the speech signals. When the other powerline communications modules receive the coded speech waveform over the network, the powerline communications modules convert the signal back to an analog speech waveform, e.g., by using a speech coding integrated circuit or a software-implemented algorithm (column 18, lines 55-63)].

e. Referring to claims 9, 17:

j. These claims have limitations that is similar to those of claim 5, thus they are rejected with the same rationale applied against claim 5 above.

f. Referring to claim 12:

i. This claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

Response to Argument

4. Applicant's arguments filed January 24, 2006 have been fully considered but they are not persuasive.

Applicant argues that:

The cited references, Friedman and Meiksin, in combination does not disclose or suggest a portable security device which loads a same private key to the powerline modem devices. In addition, applicant further argues that nowhere in the cited combination is the step of transmitting a private key individually to each of the plurality of powerline modem devices to be secured in a network such that each powerline modem device receives the private key in isolation of the network by connecting each of the plurality of the powerline modem devices to a portable security device which transmits the private key directly to the powerline modem device in isolation from other powerline modem devices, each of the plurality of powerline modem devices store the private key.

Examiner disagrees with the applicant and still maintains that:

Friedman teaches a network security device is connected between a protected client and a network. The network security device negotiates a session key

Art Unit: 2135

with any other protected client. Then, all communications between the two clients are encrypted. The inventive device is self-configuring and locks itself to the IP address of its client. Thus, the client cannot change its IP address once set and therefore cannot emulate the IP address of another client. When a packet (which included the public key and private key) is transmitted from the protected host, the security device translates the MAC address of the client to its own MAC address before transmitting the packet into the network. Packets addressed to the host, contain the MAC address of the security device. The security device translates its MAC address to the client's MAC address before transmitting the packet to the client (see Friedman's abstract). In addition, the network security device's serial number (element 510) and the time of activation (element 504) may also be burned into the static database entry 500. As discussed below, these values may be used to generate a seed for the network security device's static private key. Figure 7 is a flowchart 700 illustrating a preferred activation method. First, an "activation packet" containing an activation string in the payload may be sent from a connected computer, such as a host 404, through the network security device 400 (step 702). The packet is received by the device 400, which determines whether it has been activated (step 704) (column 9, lines 44-53 of Friedman). Although Friedman discloses "a network security device is connected between a protected client and a network. The network security device negotiates a session key with any other protected client. Then, all communications between the two clients are encrypted", Friedman is silent on the capability of using the communication via powerline modem. On the other hand, Meiksin teaches Figure 17 illustrates a typical implementation of a powerline communications module showing connections between individual blocks. The powerline communications module 1700 includes an interface module 1701 comprising a digital signal processor ("DSP"), logic, and active electronics for processing the audio signals and external control signals. The interface module 1701 is connected to an AC powerline modem 1702 through connections 1707. The connection 1707 may be standard RS-232 serial communications. The AC powerline modem 1702 modulates and demodulates digital data for transmission and reception over the AC powerline (column 20, lines 24-35 of Meiksin).

Art Unit: 2135

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the combination of Friedman and Meiksin is sufficient.

Applicant further argues that:

The cited combination also fails to disclose or suggest the step for providing an actual connection between the security device and the powerline modem device that cited in claim 12.

Examiner again disagrees with the applicant and still maintains that:

First of all, claim 12 only cites connecting the security device to each powerline modem device to be secured in a network. This is different from that of the above applicant's argument. A person skill in the art can only say that an actual connection between the security device and the powerline modem device is not the same as connecting the security device to each powerline modem device to be secured in a network. The term "an actual connection" means "wired or direct connection", whereas the term "connecting" is broad and could mean any type of connection, e.g., wired or wireless. Besides, the term "an actual connection" is not even addressed in the claim language.

For the above reasons, it is believed that the rejections should be sustained.

Allowable Subject Matter

5. Claims 3 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Art Unit: 2135

6. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

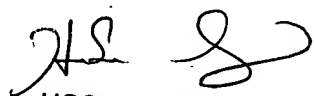
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

TBT

March 24, 2006


HOSUK SONG
PRIMARY EXAMINER